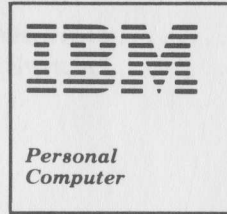


# Option Instructions

## 64KB Memory Module Kit

For



The warranty terms and conditions applicable in the country of purchase in respect of an IBM Personal Computer product are available from the supplier. Please retain them with your proof of purchase.

Any US Option Instructions without the above warranty notice are inapplicable and should be ignored.

***No statements contained in this documentation shall affect the statutory rights of consumers.***

This option consists of:

- 64KB Memory Module Kit

If any items are missing or damaged, notify your place of purchase.



# Contents

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Contents



# Installation Requirements

The 64KB Memory Module Kit can be installed only on the 64/256KB Memory Expansion Option.

The 64KB Memory Module Kits must be installed in sequential order on the 64/256KB option.

The 64K/256KB Memory Expansion Option must be removed from the system unit to install the module kits.

## Tool Required

- Medium-size, flat-blade screwdriver

Optional:

- Medium screwstarter
- 3/16-inch nutdriver
- 1/4-inch nutdriver
- Module puller

## Notes:

The 64KB Memory Module Kit can be installed only on the 64KB Memory Expansion Option.

The 64KB Memory Module Kit must be installed in the 64KB Memory Expansion Option.

The 64KB Memory Expansion Option must be removed from the system unit to install the module kit.

## Tools Required

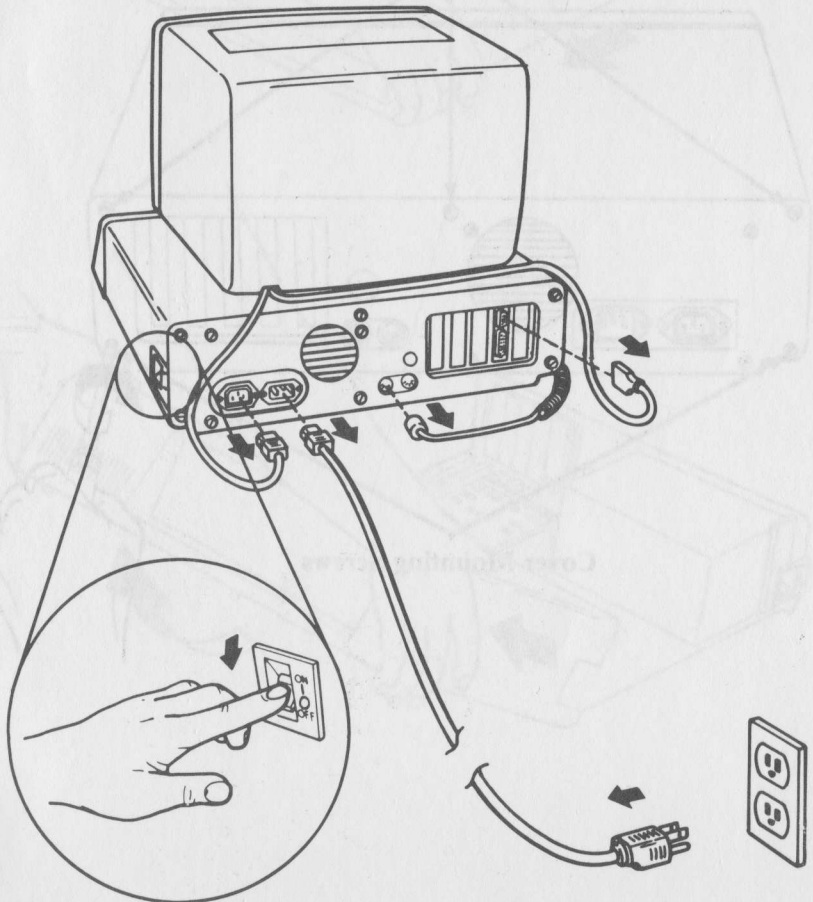
• Medium-size flat-head screwdriver

Optional:

- Memory screwdriver
- 7/16-inch nutdriver
- 1/4-inch nutdriver
- Module nut

# Installation Instructions

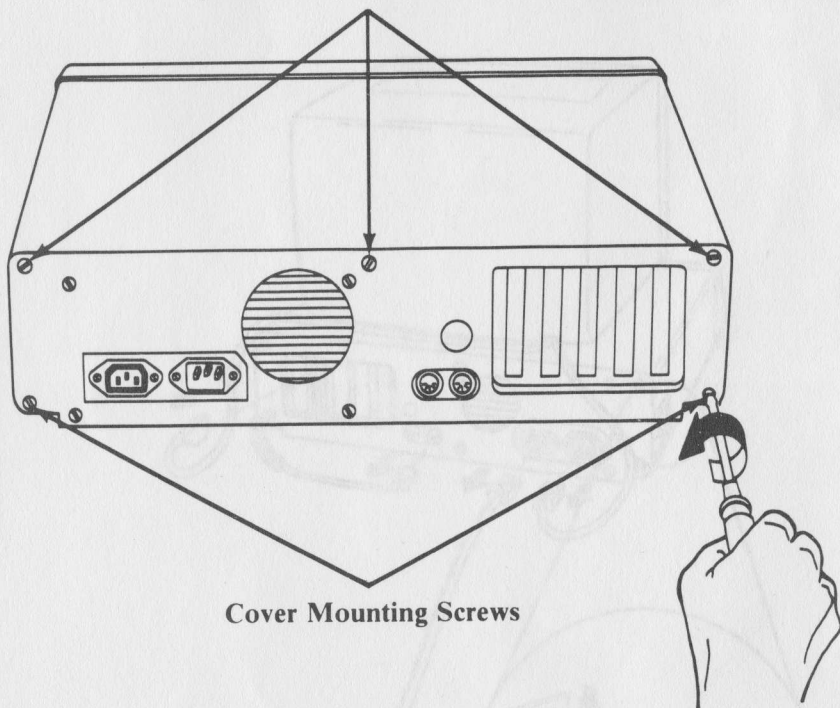
1. Set the Power switch on the system unit (and expansion unit, if attached) to Off.
2. Set all external power switches Off (printer, TV, etc.).
3. Unplug the system unit's (and expansion unit's) power cord from the wall outlet.
4. Disconnect all cables from the rear of the system unit.



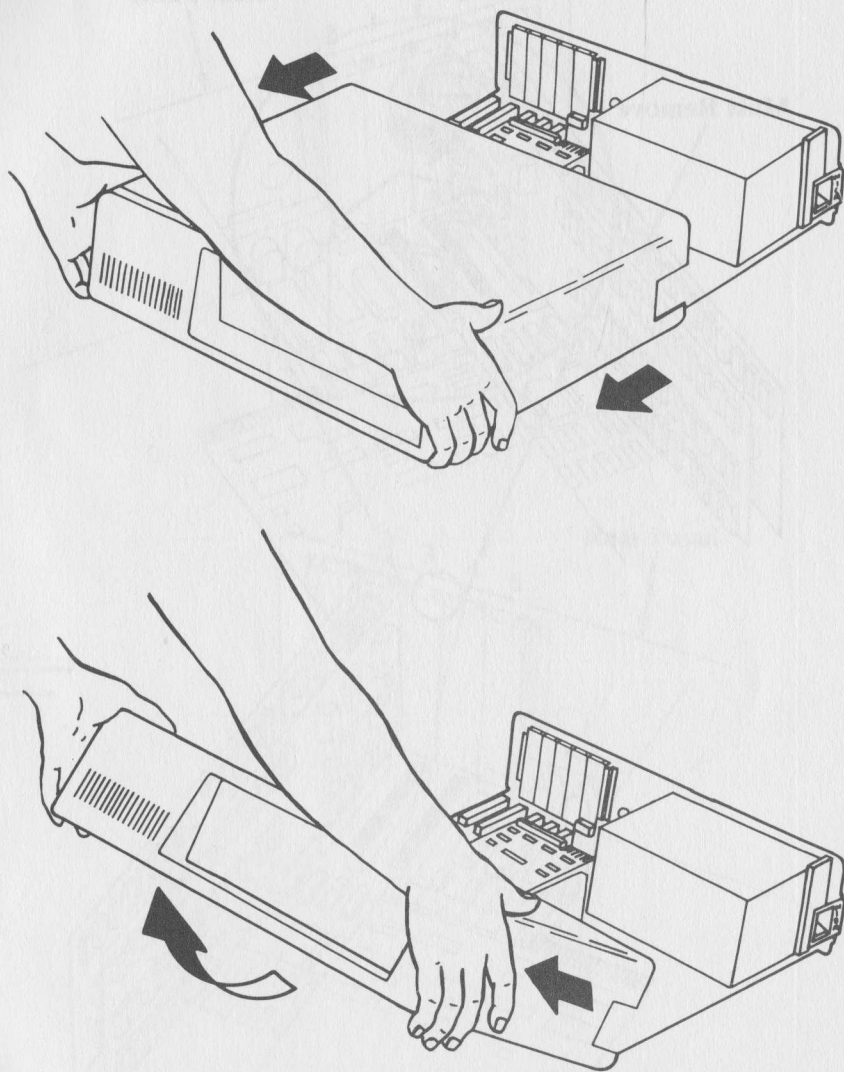
MEMORY

5. Move your keyboard and all external options away from the work area.
6. Position the system unit to allow access to the rear.
7. Use a flat-blade screwdriver or 1/4-inch nutdriver and remove the five cover mounting screws by turning them counterclockwise as shown in the figure below. Save the screws for the installation of the cover.

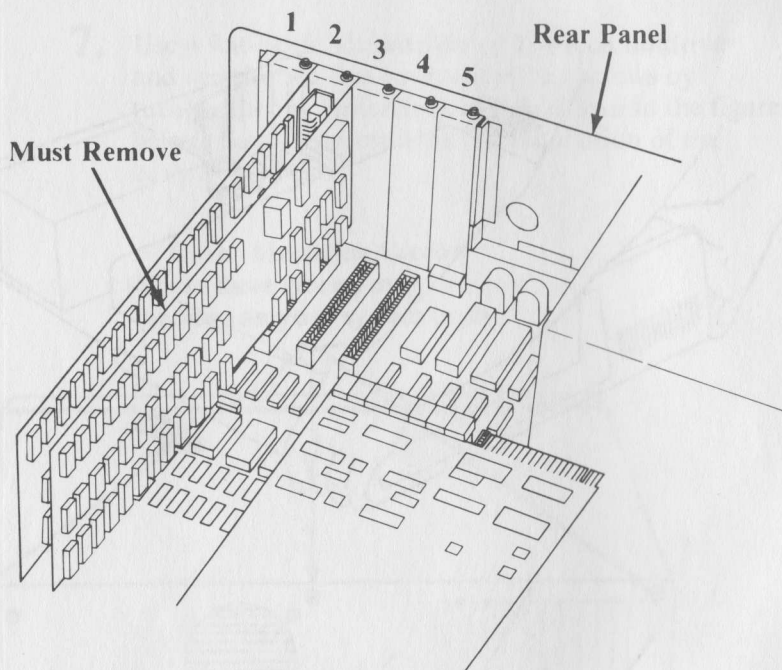
**Cover Mounting Screws**  
(These three screws may not be present on your system unit)



8. Carefully slide the system unit's cover away from the rear and to the front as indicated in the figure below. When the cover will go no further, tilt it up, remove it from the base, and set it aside.

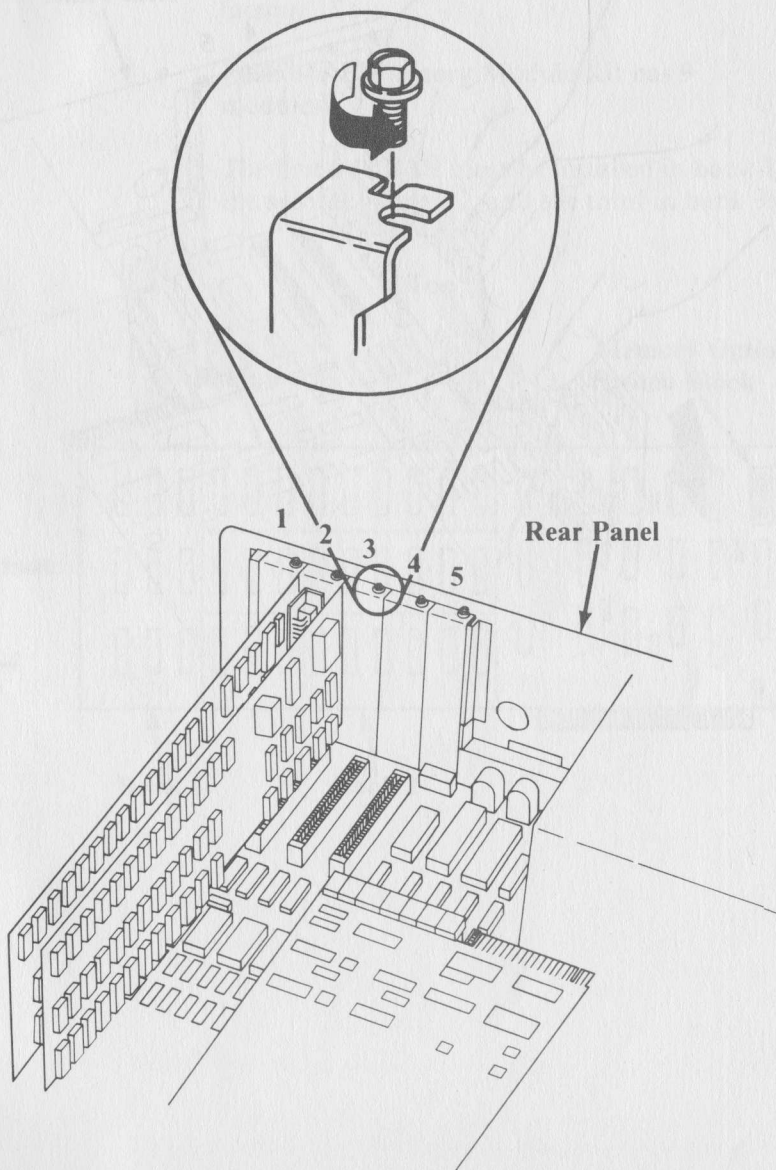


9. Look at the inside left rear of your system unit. There are five unit expansion slots. Locate the 64/256KB Memory Expansion Option.



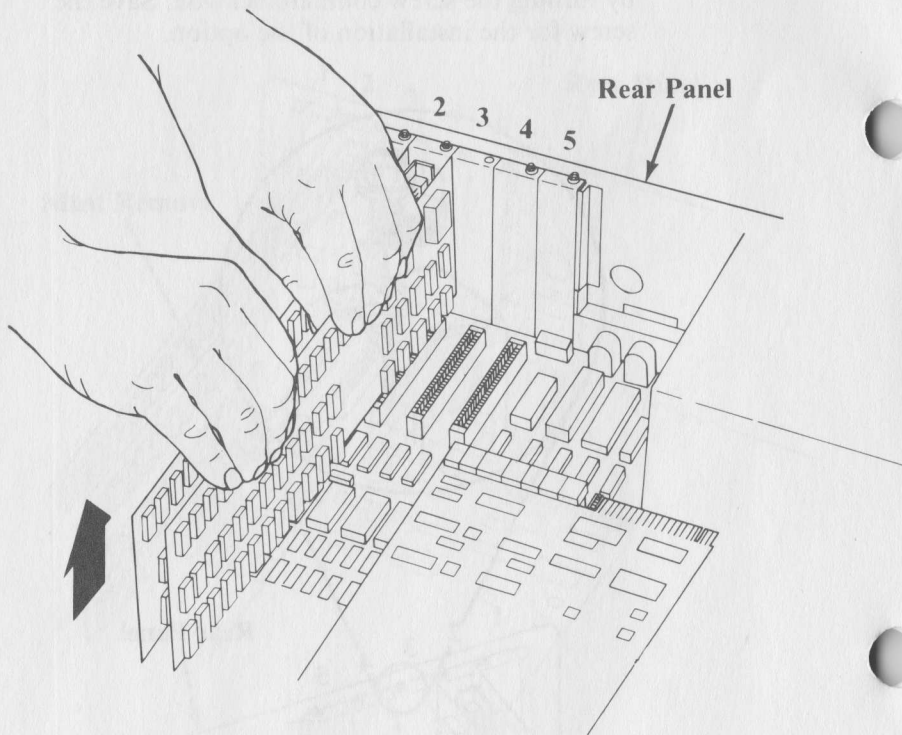


- 10.** Use a flat-blade screwdriver or 3/16-inch nutdriver and remove the screw that holds the option in place by turning the screw counterclockwise. Save the screw for the installation of the option.



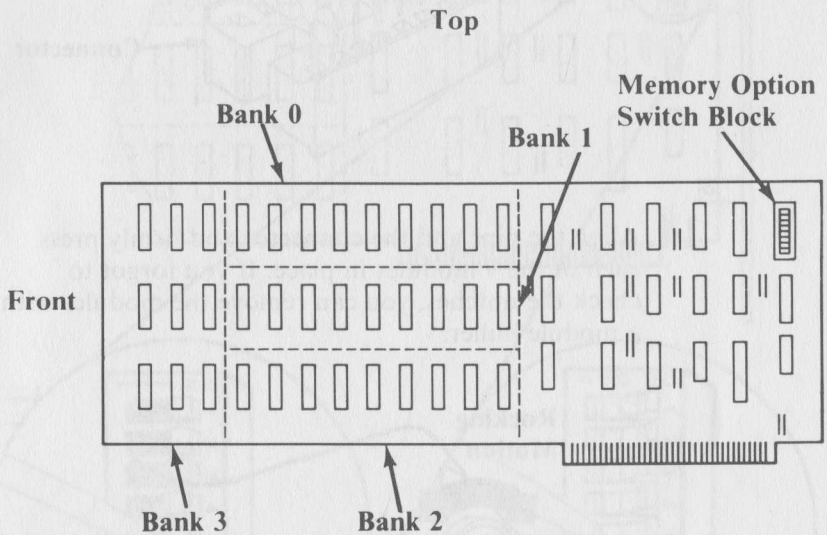


- 11.** Grasp the option by the top and lift straight up.



**12.** Place the option on a flat surface with the switch block and components facing up. Study the figure below to familiarize yourself with the 64/256KB Memory Expansion Option layout.

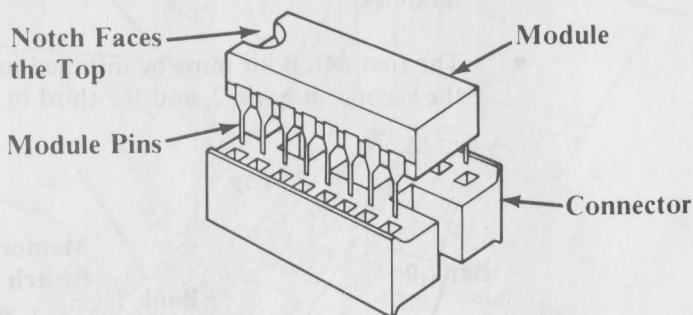
- Bank 0 has modules already installed by the factory.
- Each 64KB Memory Module Kit has 9 modules.
- The first 64KB kit must be installed in bank 1, the second in bank 2, and the third in bank 3.



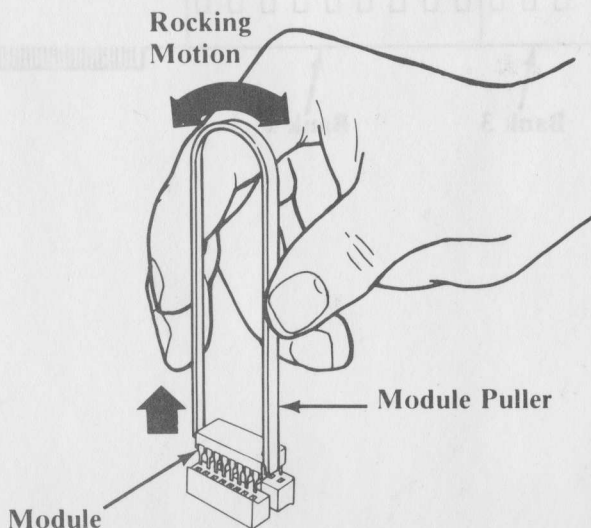
**13.** You are now ready to install your memory modules.

**WARNING:** The pins on the module are easily bent and must be aligned with the connector before pressing in place.

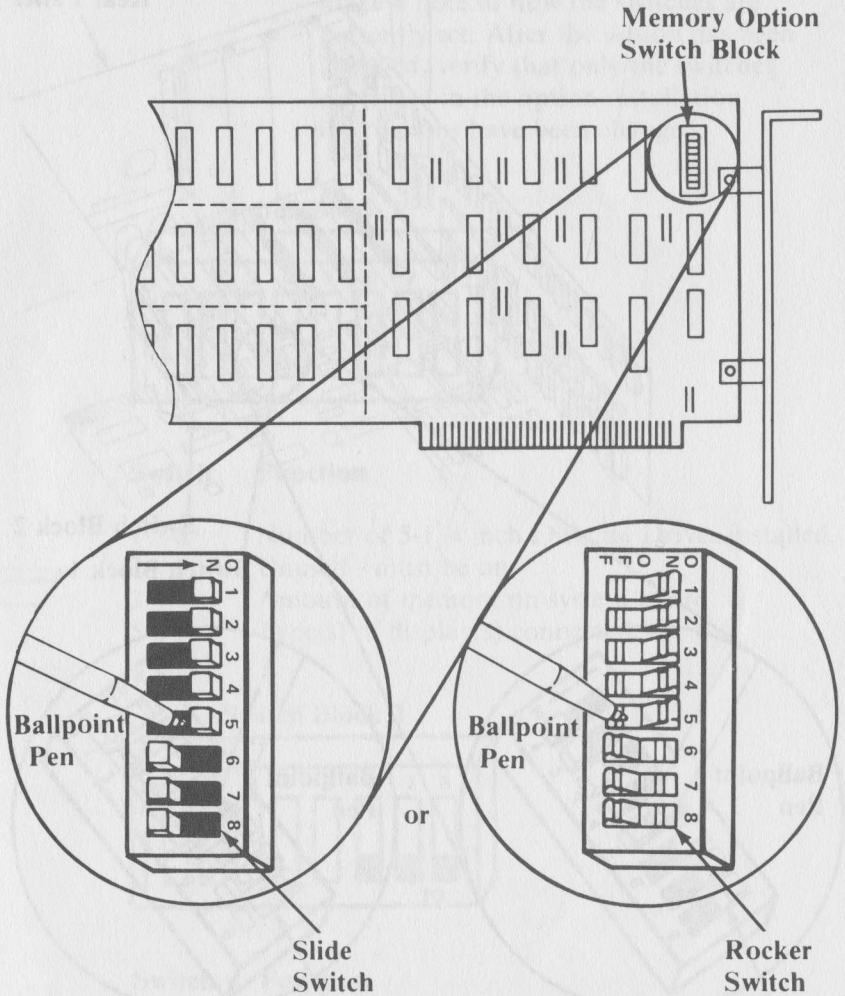
Each module has a notch that when installed, will face the top.



**14.** Align the pins and the connector and firmly press each of the 9 modules in place. If you forgot to check the notches, you can remove the modules with a module puller.

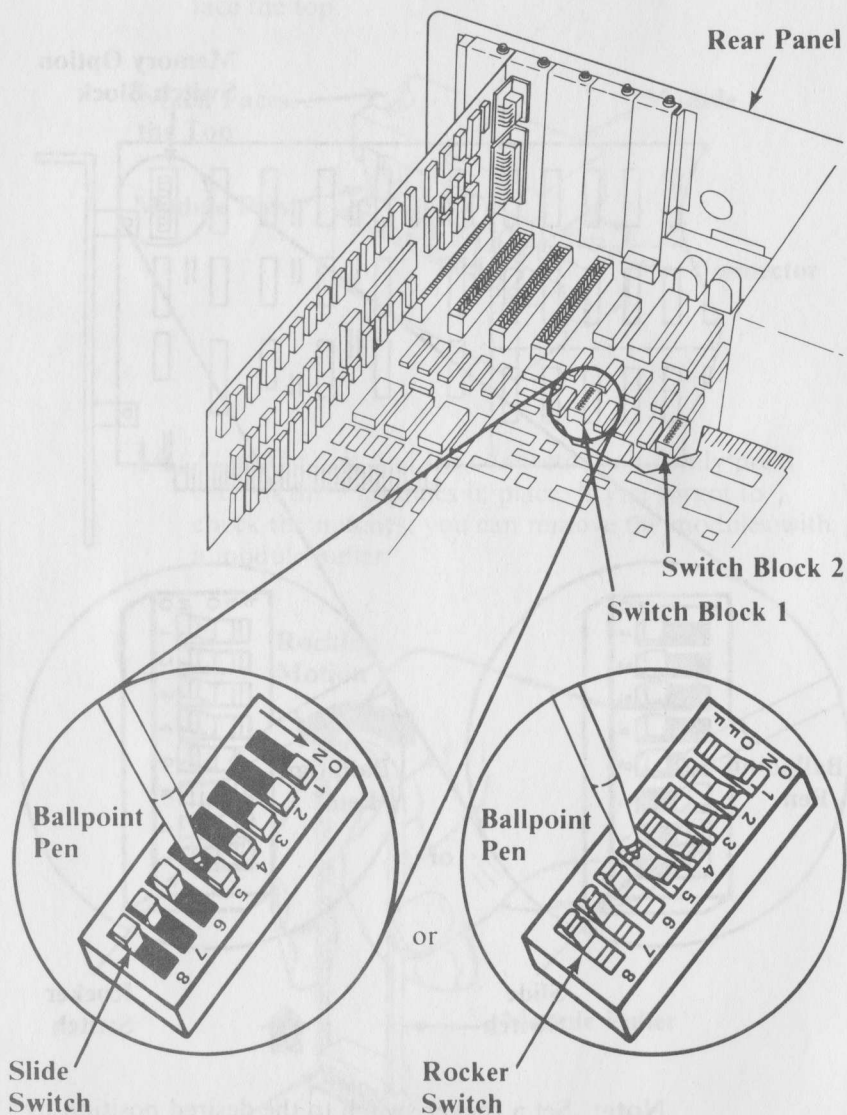


15. Place the option on a flat surface with the switch block and components up. Study the figure below to familiarize yourself with the 64/256KB Memory Expansion Option. The switch block on the 64/256KB Memory Expansion Option must reflect the amount of memory installed on the option itself and within the system unit.



**Note:** Set a rocker switch to the desired position by pressing down the rocker.

- 16.** The switches on the system board are set to reflect the amount of memory and other options installed. Take a minute to familiarize yourself with their location. The use of a ballpoint pen will help you set the switches easily. Use the charts on the following pages and set switch blocks 1 and 2 at this time.



**Note:** Set a rocker switch to the desired position by pressing down the rocker.

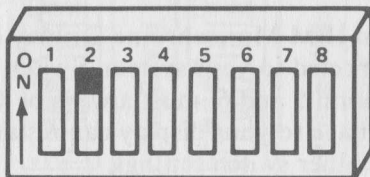
# Switch Setting Charts

## 16KB-64KB CPU System Board

### System Board Switches

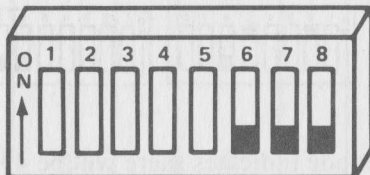
**WARNING:** Before you change any switch settings, make a note of how the switches are presently set. After the option has been installed, verify that only the switches described in the option installation instructions have been changed.

Switch Block 1



Switch	Function
1-7-8	Number of 5-1/4 inch Diskette Drives installed.
2	Unused - must be on.
3-4	Amount of memory on system board.
5-6	Type(s) of display(s) connected.

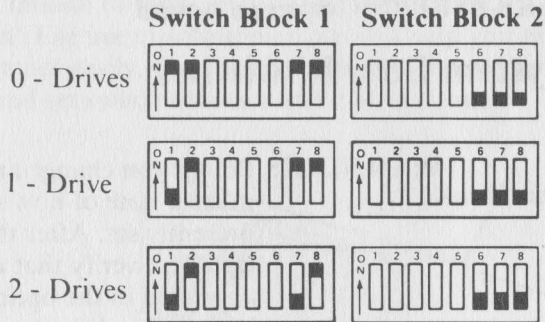
Switch Block 2



Switch	Function
1-2-3-4-5	Amount of memory options installed.
6-7-8	Always in the off position.

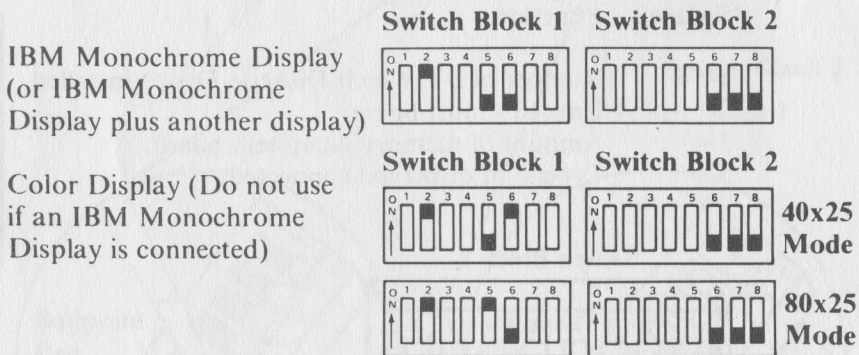


Number of 5-1/4 inch Diskette Drives installed.



Type(s) of display(s) connected

**WARNING:** If an IBM Monochrome Display is connected to your system, Switch Block 1, position 5 and 6, must always be Off. Damage to your display can result with any other switch settings.

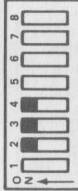
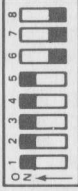


**Note:** The 40x25 mode indicates there will be 40 characters across the screen and 25 lines down the screen. The 80x25 mode indicates there will be 80 characters across the screen and 25 lines down the screen. The 80x25 mode, when used with home televisions and various displays, can cause loss of character quality.

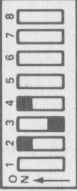



# System Board Memory Switch Setting

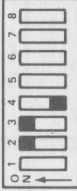
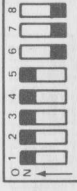
## 16K of Memory on System Board

System Board Switches		
	Switch Block 1	Switch Block 2

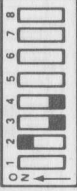

## 32K of Memory on System Board

System Board Switches		
	Switch Block 1	Switch Block 2

## 48K of Memory on System Board

System Board Switches		
	Switch Block 1	Switch Block 2

## 64K of Memory on System Board

System Board Switches		
	Switch Block 1	Switch Block 2

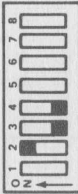
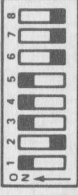
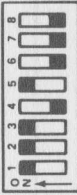


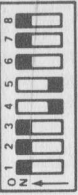
# System Board and Memory Option Switch Settings

96K Total Memory  
32K + (64K on System Board)

System Board Switches	<div data-bbox="210 555 288 746"> </div> <div data-bbox="231 794 258 978">Switch Block 1</div>	<div data-bbox="210 76 288 268"> </div> <div data-bbox="231 300 258 483">Switch Block 2</div>
1-32KB option	<div data-bbox="317 730 343 970">64/256KB Options</div>	<div data-bbox="317 435 343 619">64KB Options</div> <div data-bbox="322 100 348 284">32KB Options</div> <div data-bbox="370 108 447 300"> </div>

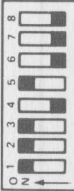
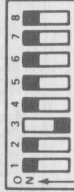
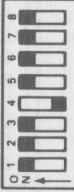
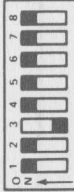
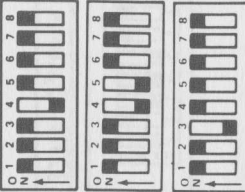
# System Board and Memory Option Switch Settings

128K Total Memory  
64K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	64/256KB Options	64KB Options
1-64/256KB option with 64KB installed		
1-64KB option		
2-32KB options		 



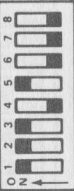

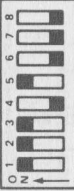


# System Board and Memory Option Switch Settings

160K Total Memory  
96K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	64KB Options
1-64 /256KB option with 64K B installed 1-32KB option		
1-64KB option 1-32KB option		
3-32KB options		

# System Board and Memory Option Switch Settings

## 192K Total Memory 128K + (64K on System Board)

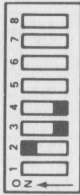
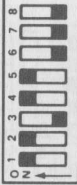
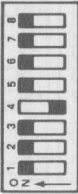
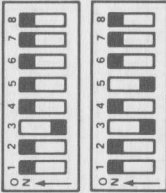
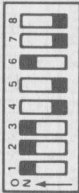
System Board Switches	Switch Block 1	Switch Block 2
		
	<b>64/256KB Options</b>	<b>64KB Options</b>
1-64/256KB option with 64KB installed 1-64KB option		
2-64KB options		
1-64/256KB option with 64KB installed 2-32KB options		 

CONTINUED

MEMORY

System Board and Memory Option Switch Settings

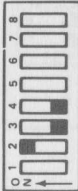
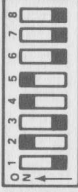
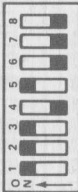
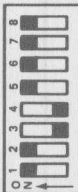
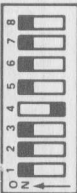
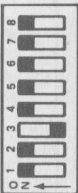
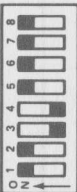
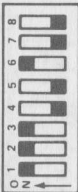
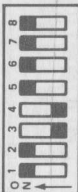
192K Total Memory (continued)  
128K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	64/256KB Options	32KB Options
1-64K B option 2-32K B options		
1-64/256KB option with 128KB installed		



# System Board and Memory Option Switch Settings

## 224K Total Memory 160K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	<b>64/256KB Options</b>	<b>32KB Options</b>
1-64/256KB option with 64KB installed 1-64KB option 1-32KB option		
2-64KB options 1-32KB option	 	
1-64/256KB option with 128KB installed 1-32KB option		



# System Board and Memory Option Switch Settings

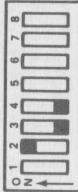
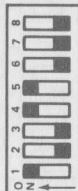
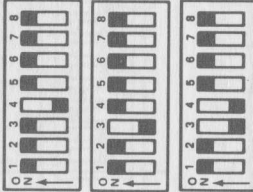
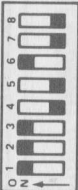
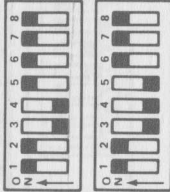
## 256K Total Memory 192K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
64/256KB Options		
1-64/256KB option with 192K B installed		
1-64/256KB option with 128K B installed 1-64KB option		
1-64/256KB option with 64K B installed 2-64KB options		
32KB Options		

CONTINUED


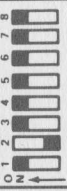
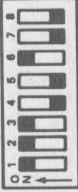
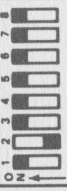
# System Board and Memory Option Switch Settings

256K Total Memory (continued)  
192K + (64K on System Board)

System Board Switches	Switch Block 1		Switch Block 2	
				
	64/256KB Options	64KB Options	32KB Options	
3-64K B options				
1-64/256KB option with 128K B installed 2-32KB options				


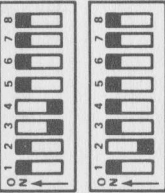
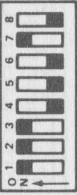
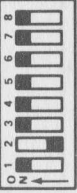
# System Board and Memory Option Switch Settings

## 288K Total Memory 224K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	64KB Options
I-64/256KB option with 192KB installed I-32KB option		
I-64/256KB option with 128KB installed I-64KB option I-32KB option		

# System Board and Memory Option Switch Settings

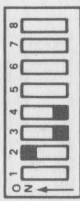

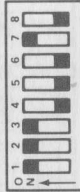
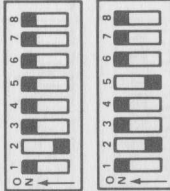
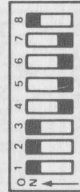
320K Total Memory  
256K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	64KB Options
1-64/256KB option with 128KB installed 2-64KB options		
1-64/256KB option with 192KB installed 1-64KB option		

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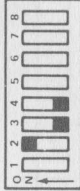
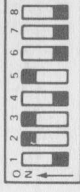

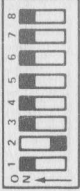
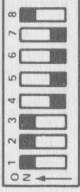
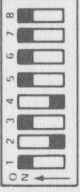
System Board and Memory Option Switch Settings

320K Total Memory (continued)  
256K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	<b>64/256KB Options</b>	<b>32KB Options</b>
1-64/256KB option with 192KB installed 2-32KB options		
1-64/256KB option with 256KB installed		

# System Board and Memory Option Switch Settings

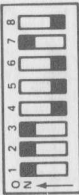
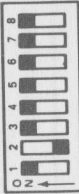
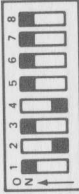
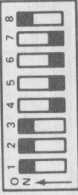
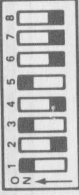
352K Total Memory  
288K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	64/256KB Options	64KB Options
I-64/256KB option with 192KB installed I-64KB option I-32KB option		
I-64/256KB option with 256KB installed I-32KB option		



# System Board and Memory Option Switch Settings

## 384K Total Memory 320K + (64K on System Board)

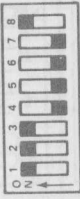
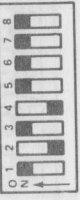
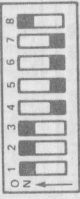

System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	64KB Options
1-64/256KB option with 192KB installed 2-64KB options		 
1-64/256KB option with 256KB installed 1-64/256KB option with 64KB installed	 	

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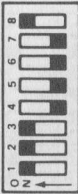
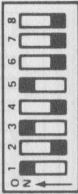


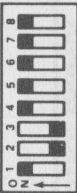
# System Board and Memory Option Switch Settings

384K Total Memory (continued)  
320K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	64KB Options
1-64/256KB option with 256KB installed 1-64KB option		
1-64/256KB option with 256KB installed 2-32KB options		

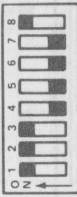
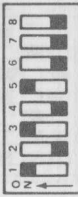
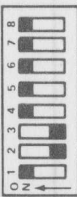
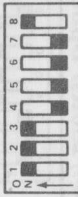
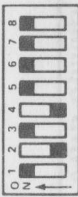
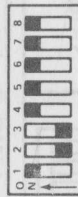
# System Board and Memory Option Switch Settings

## 416K Total Memory 352K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	64KB Options
I-64/256KB option with 256KB installed I-64/256KB option with 64KB installed I-32KB option	 	
I-64/256KB option with 256KB installed I-64KB option I-32KB option		

# System Board and Memory Option Switch Settings

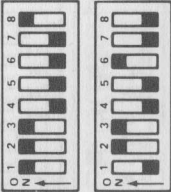

448K Total Memory  
384K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	64KB Options
1-64/256KB option with 256KB installed 1-64/256KB option with 64KB installed 1-64KB option	 	
1-64/256KB option with 256KB installed 2-64KB options		 

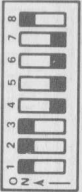
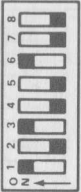
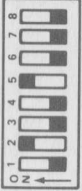
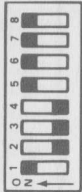
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# System Board and Memory Option Switch Settings

448K Total Memory (continued)  
384K + (64K on System Board)

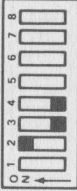

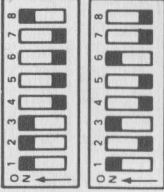
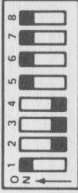
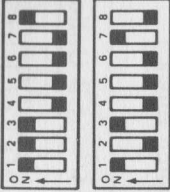
System Board Switches	Switch Block 1	Switch Block 2
	64/256KB Options	32KB Options
1-64/256KB option with 256KB installed 1-64/256KB option with 128KB installed		

# 480K Total Memory 416K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
<p>1-64/256KB option with 256KB installed</p> <p>1-64/256KB option with 128KB installed</p> <p>1-32KB option</p>	<p>64/256KB Options</p>  	<p>32KB Options</p>  

# System Board and Memory Option Switch Settings

512K Total Memory  
448K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	<b>64/256KB Options</b>	<b>64KB Options</b>
I-64/256KB option with 256KB installed I-64/256KB option with 128KB installed I-64KB option		
I-64/256KB option with 256KB installed I-64/256KB option with 192KB installed		



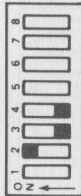
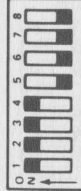
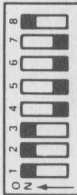
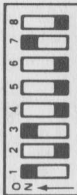
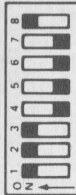
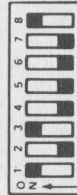
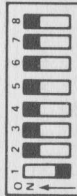
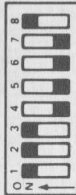
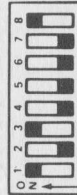
# System Board and Memory Option Switch Settings

544K Total Memory  
480K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
1-64/256KB option with 256KB installed 1-64/256KB option with 192KB installed 1-32KB option	<div data-bbox="437 767 514 959"> </div> <div data-bbox="533 767 610 959"> </div>	<div data-bbox="394 113 421 296">32KB Options</div> <div data-bbox="437 113 514 304"> </div>
	64KB Options	32KB Options

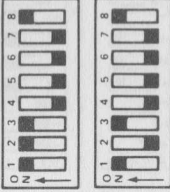
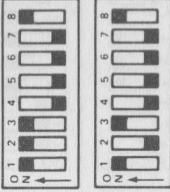
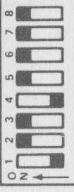
# System Board and Memory Option Switch Settings

576K Total Memory  
512K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	<b>64/256KB Options</b>	<b>32KB Options</b>
1-64/256KB option with 256KB installed 1-64/256KB option with 192KB installed 1-64KB option	   	
2-64/256KB options with 256KB installed	 	

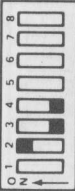
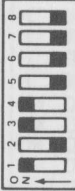
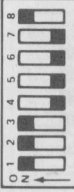
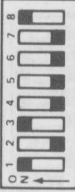
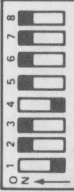
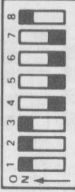
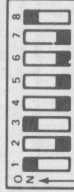

# System Board and Memory Option Switch Settings

608K Total Memory  
544K + (64K on System Board)

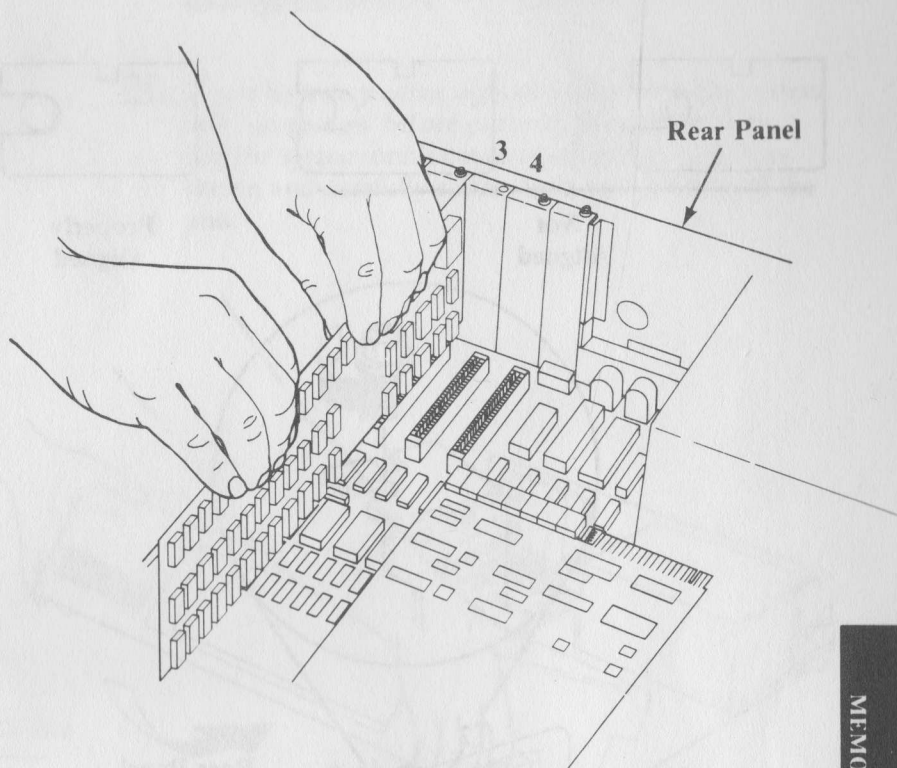
System Board Switches	Switch Block 1	Switch Block 2
2-64/256KB options with 256KB installed 1-32KB option	64/256KB Options	32KB Options
		

System Board and Memory Option Switch Settings

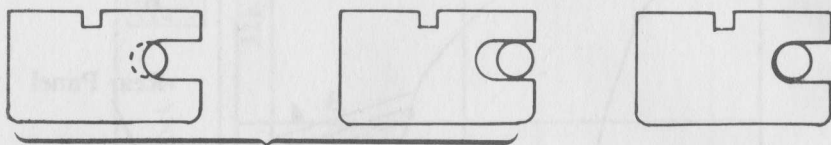
640K Total Memory  
576K + (64K on System Board)

System Board Switches	Switch Block 1	Switch Block 2
		
	<b>64/256KB Options</b>	<b>64KB Options</b>
2-64/256KB options with 256KB installed 1-64KB option	 	
2-64/256KB options with 256KB installed 1-64/256KB option with 64KB installed	  	

- 17.** Hold the option by the top and firmly press it into the expansion slot that you removed it from.

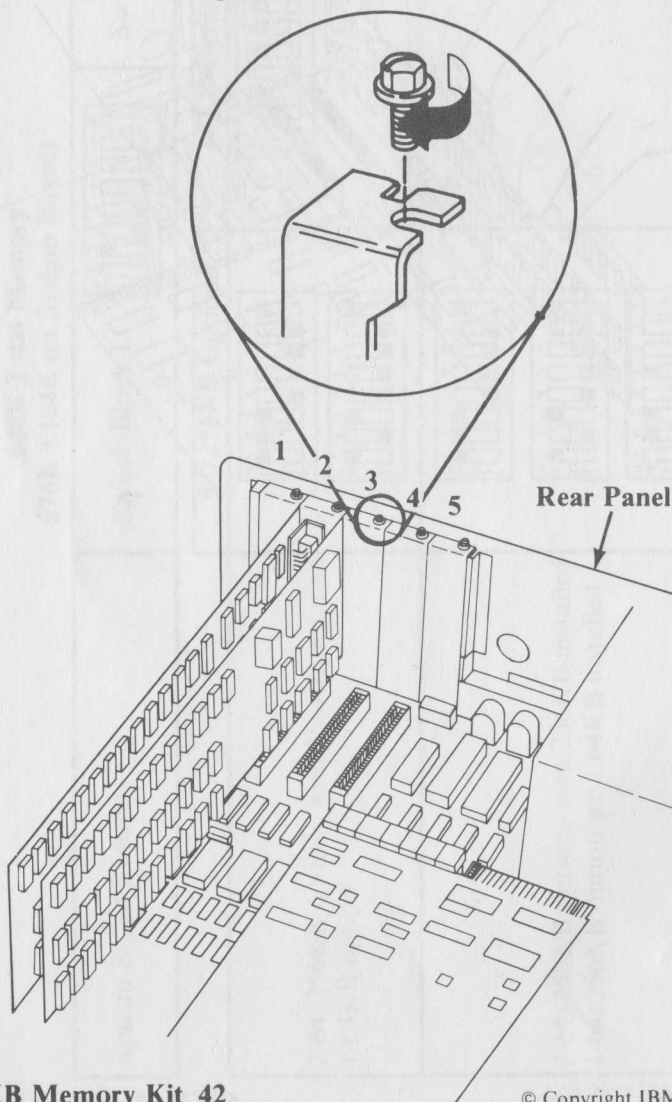


- 18.** Align the slot in the option retaining bracket with the hole in the rear plate of the system unit. Start the screw clockwise, then tighten with a flat-blade screwdriver or 3/16-inch nutdriver.



**Not  
Aligned**

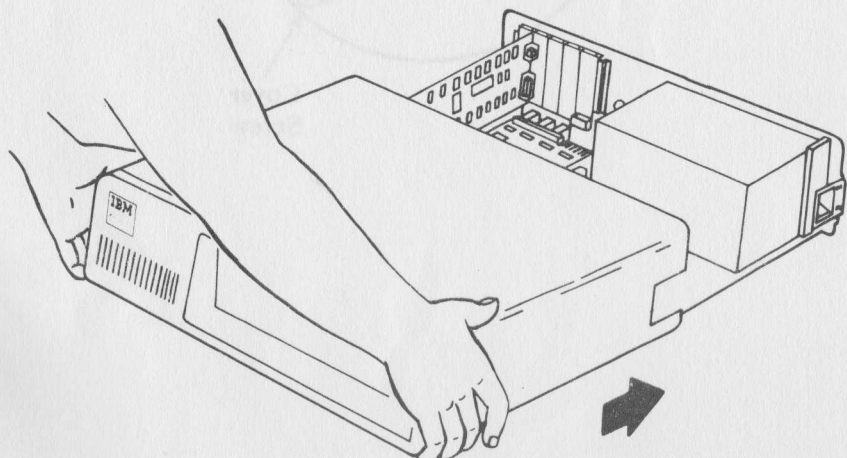
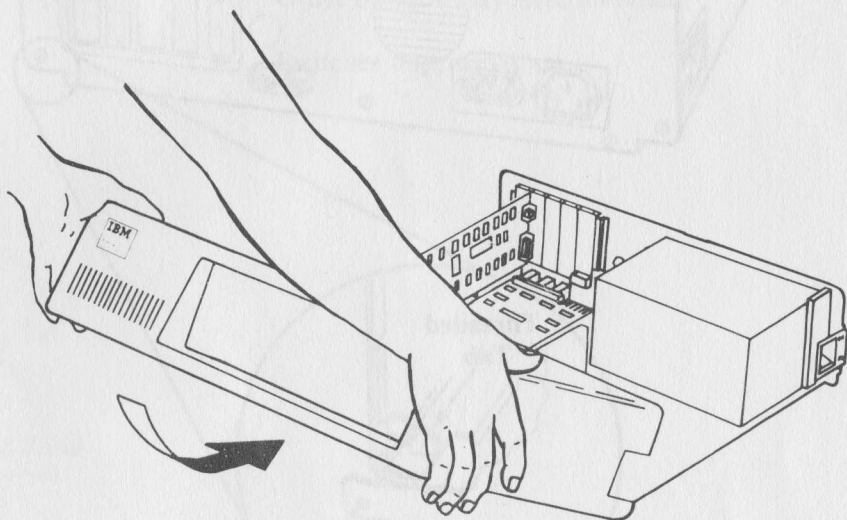
**Properly  
Aligned**



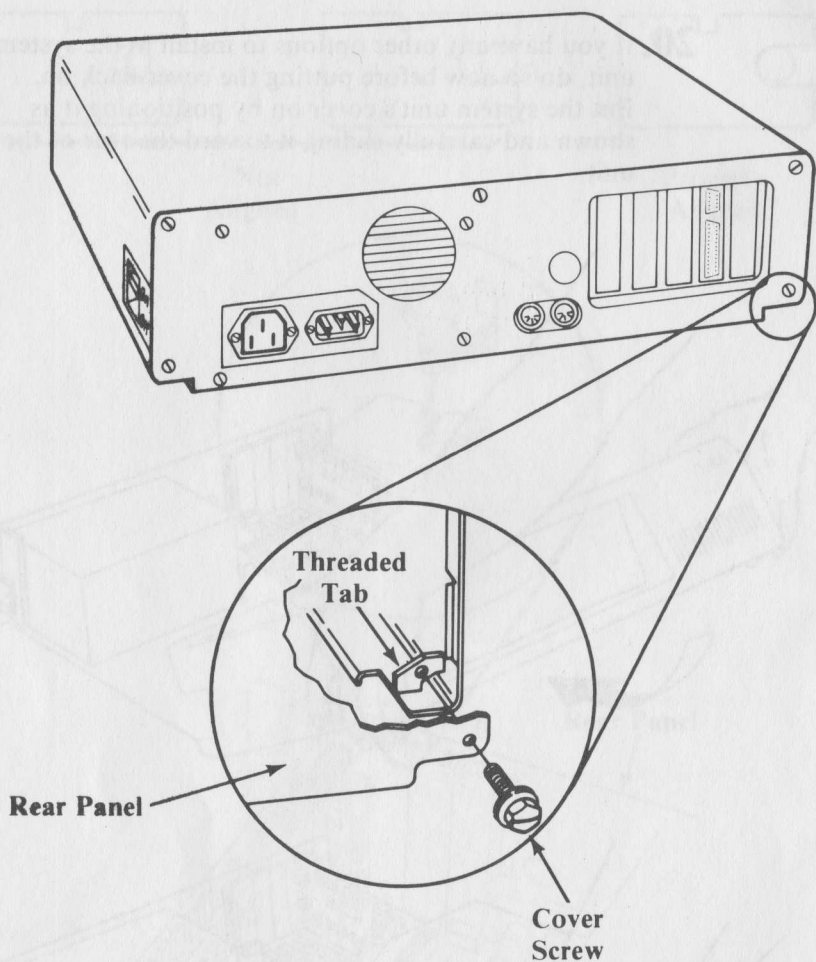


**19.** If you have an expansion unit attached, go to the Expansion Unit Option installation procedures and set the switches on the extender card to reflect the total system memory.

**20.** If you have any other options to install in the system unit, do so now before putting the cover back on. Put the system unit's cover on by positioning it as shown and carefully sliding it toward the rear of the unit.



- 21.** When the cover is all the way to the rear, align the screw with the threaded tabs and tighten. Use a flat-blade screwdriver or 1/4-inch nutdriver and turn clockwise.



**22.** Your system is now ready to be recabled and to verify that it is operational:

Go to Section 2, "Setup."

**Note:** If you have any problem after installation, one of the following is the most likely cause:

- 64KB Memory Module
- Improper cabling
- Other options may have loosened
- Switches improperly set

## Notes: